

REMARKS

Claims 1 and 3-14 currently appear in this application. The Office Action of May 12, 2003, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicants respectfully request favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Claims 1, 3-6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over CA 1213170A in view of Vitkovsky.

This rejection is respectfully traversed. Despite the Examiner's assertion that CA 1213170A teaches a method for thawing frozen ground meat by freezing the ground meat at -40°C, comminuting the frozen meat in two steps, thawing with elevated temperature and without mashing or additives, and comminuting to a size of 3-19 mm, there is nothing in CA1213170A that discloses or suggests milling frozen ground fish meat mass to a uniform particle size, as required by claim 1. CA1213170A states at page 16, lines 3-6, "The comminution of the frozen strands by a two stage or two step process as described also provides particles which are somewhat irregular in shape and seem to adhere to each other particularly well in forming shaped meat products from thawed particles." [emphasis added] It is quite clear from this that the milled particles of CA1213170A do not have a uniform

particle size. It is also clear that CA1213170A uses such irregular shapes in order to promote efficient adhesion the particles in forming shaped meat products. There is nothing in CA1213170A that would lead one skilled in the art to mill a frozen ground meat or fish to a uniform particle size.

The Examiner concedes that CA1213170A does not specifically recite fish or milling at a temperature below -15°C. therefore, CA1213170A neither teaches nor suggest milling a frozen ground fish meat mass to a uniform particle size at -15°C or below, as recited in claim 1.

While Vitkovsky teaches milling frozen minced fish to a size of 5-12 mm by freezing it to a temperature of 0 to -196°C and then milling the frozen minced fish, there is nothing in Vitkovsky that teaches of suggests milling the frozen ground fish meat mass to a uniform particle size.

[emphasis added] Vitkovsky describes the fracturing stage with reference to Figure 5, and describes this at column 7, lines 15-33. Column 7, lines 24-29, states, "The container 41 is provided with a plurality of discharge apertures in the lower portions thereof, the discharge aperture 46 having a predetermined size the through which particles 47 of fractured frozen material smaller than the aperture size are discharged." Figure 5 clearly shows that particles 47 are not uniform. In this regard, attention is also directed to column 7, lines 44-49, stating, "The preferred method of the invention includes the step of sizing the free-flowing particles of frozen food product in sizing stage 50 so as to

separate undersized particles from larger sized particles required in the final particulate food product." Because the particles must be separated so that undersized particles are removed, it is clear that the particles do not have a uniform particle size.

Contrary to the Examiner's assertion, Vitkovsky does not specifically disclose that the fracturing stage is conducted at a temperature of -15°C or below. This is a freezing temperature, not a fracturing stage temperature.

As is described in the paragraph bridging pages 2 and 3 of the instant specification, the purpose of the herein claimed invention is "to provide a method by which a frozen ground fish meat can be rapidly thawed while maintaining its ability to gel at the maximum level without causing any deterioration in the qualities thereof." The purpose of Vitkovsky is "to provide a method and apparatus for producing a frozen free-flowing food product which can be used as a marketable final product in itself or can be used in food preparation processes having advantages over prior food preparation processes", column 1, lines 49-54. It is clear that Vitkovsky had no intention to thaw the frozen free-flowing food product. No one skilled in the art would have been motivated to use the invention of Vitkovsky in order to achieve rapid thawing before the herein claimed invention was made.

As stated above, neither CA1213170A nor Vitkovsky discloses or suggests "milling a frozen ground fish meat mass

to a uniform particle size at -15°C or below" in order to achieve rapid thawing without deterioration of the fish meat. Even had one skilled in the art considered milling a frozen ground fish meat mass to a uniform particle size at -15°C or below, he could not have predicted that the resultant product achieves rapid thawing without deteriorating the fish meat.

Claims 7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over CA1213170A in view of Vitkovsky as applied above, and further in view of Katoh et al.

This rejection is respectfully traversed. Claim 7 has been amended to incorporate the limitation of claim 15 that the milling step if conducted at a temperature of -15°C or below, and claim 15 has been cancelled. Katoh et al. merely teach that seasonings and starch can be incorporated into fish paste using a pin mixer. However, Katoh et al. do not supply the limitations which are missing from CA1213170A and Vitkovsky, namely, that the frozen ground fish meat is milled to a uniform particle size at -15°C or below. Therefore, Katoh et al. add nothing to CA1213170A and Vitkovsky.

Claims 809 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. in view of CA1213170A and JP 06133739A, hereinafter JP'739.

This rejection is respectfully traversed. The Examiner concedes that Katoh et al. do not teach milling frozen, ground fish meat or heating with electricity.

CA1213170A is said to teach frozen ground meat by milling the frozen meat and thawing with elevated temperature, and JP'739 is said to teach producing molded fish paste products by heating with electricity.

JP'739 teaches using electric current to thaw, while the present invention uses electric current to heat and gel a molded product. There is no suggestion in any of the cited patents that electric current can be used to heat and mold a product rather than to thaw frozen fish.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. in view of CA1213170A, JP'739, and Vitkovsky.

This rejection is respectfully traversed. Claim 16 is cancelled in the present amendment, making this rejection moot.

Claim 8 now has substantially the same scope as cancelled claim 16. However, there is nothing in the combination of Katoh et al. in view of CA1213170A, JP'739, and Vitkovsky that would lead one skilled in the art to milling a frozen ground fish meat mass to form substantially uniform particles at -15°C, thawing the milled fish meat by elevating the temperature to five a ground fish meat, mixing with a pin mixer to incorporate additives and form a molded product, and passing electric current through a molded product to heat the molded product and gel it.

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In view of the above, it is respectfully submitted
that the claims are now in condition for allowance, and
favorable action thereon is earnestly solicited.

Respectfully submitted,

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